CLAIMS

1. An in vivo camera system comprising:

an imager having a variable frame capture rate for producing frames;

at least one sensor for measuring a physical property relatable to the motion of said camera system;

a data processor in communication with said sensor for determining a frame capture rate in response to output of said sensor; and

a controller for providing said determined frame capture rate to said imager.

2. A system according to claim 1, wherein said sensor is an accelerometer.

3. A system according to claim 2, and including an integrator in communication with said accelerometer for generating the velocity of said in vivo camera system.

4. A system according to claim 1, wherein said sensor is a pressure sensor.

5. A system according to claim 1, wherein said sensor is an induction coil and said in vivo camera system is moving in a magnetic field.

6. A system according to claim 1, wherein said sensor is an ultrasound transducer.

7. An in vivo camera system comprising:

an imager having a variable frame capture rate for producing frames;

a storage device for storing frames captured by said imager;

an image processor for calculating the required frame capture rate from at least two frames; and

a controller for providing said calculated frame capture rate to said imager.

8. A display system for displaying the output of an in vivo camera system, the display system comprising:

a frame storage unit for storing frames of output of said camera system;

an image processor for correlating frames of said output to determine the extent of their similarity and for generating a frame display rate therefrom, wherein said frame display rate is slower when said frames are generally different and faster when said frames are generally similar; and

a display unit for displaying said frames received from said frame storage at said frame display rate.

9. A display system according to claim 8 wherein said at least two frames are two consecutive frames.

10. A display system according to claim 8 wherein said at least two frames are two non- consecutive frames.

11. A display system according to claim 8 further comprising a controller in communication with said frame storage and said image processor, wherein said controller varies said display rate of said display unit.

12. A system according to claim 1 further comprising a display system comprising:

a frame storage unit for storing at least two frames of output of said camera system;

an image processor for correlating at least two frames of said output to determine the extent of their similarity and for generating a frame display rate correlated with said similarity, wherein said frame display rate is slower when said frames are generally different and faster when said frames are generally similar; and

a display unit for displaying said frames received from said frame

storage at said frame display rate.

13. An in vivo camera system according to claim 7 further comprising a display system comprising:

a frame storage unit for storing at least two frames of output of said camera system;

an image processor for correlating at least two frames of said output to determine the extent of their similarity and for generating a frame display rate correlated with said similarity, wherein said frame display rate is slower when said frames are generally different and faster when said frames are generally similar; and

a display unit for displaying said frames received from said frame storage at said frame display rate.

14. A method for varying the frame capture rate of a series of frames generated by an in vivo camera system, the system comprising an imager, the method comprising the steps of:

storing said frames in a storage device;

correlating changes in the details of at least two frames;

changing said frame capture rate to a predetermined frame capture rate according to the degree of change between said at least two frames; and

communicating said required frame capture rate to said imager.

15. A method according to claim 14 wherein said at least two frames are consecutive frames.

16. A method according to claim 14 wherein said at least two frames are non-consecutive frames.

17. A method for varying the frame capture rate of a series of frames generated by an in vivo camera system, the system comprising an imager, the method

comprising the steps of:

measuring a physical quantity experienced by said camera system;

converting said physical quantity to a velocity of said camera system;

correlating said velocity with a predetermined frame capture rate; and

communicating said predetermined capture rate to said imager.

18. A method according to claim 17, wherein the step of measuring includes the steps of measuring acceleration and generating velocity data from said acceleration data.

19. A method according to claim 17, wherein the step of measuring includes the step of measuring acceleration.

20. A method according to claim 17, wherein the step of measuring includes the step of measuring pressure.

21. A method according to claim 17, wherein the step of measuring includes the step of measuring induced current when the camera system is moving in a magnetic field.

22. A method according to claim 17, wherein the step of measuring includes the step of measuring the motion of said camera system with an ultrasound transducer.

23. A method for varying the frame display rate of a series of frames generated by an in vivo camera system, the method comprising the steps of:

storing said frames in a storage device;

correlating changes in the details of at least two frames; and

communicating said required frame display rate to said storage device and a display unit.

24. A method according to claim 23 wherein said at least two frames are

consecutive frames.

25. A method according to claim 23 wherein said at least two frames are non-consecutive frames.

26. A method according to claim 23 wherein said step of communicating said required frame rate comprises the step of requiring the display of at least one frame a predetermined number of times.

27. A method according to claim 23 wherein said step of communicating said required frame rate comprises the step of eliminating the display of at least one frame.

28. An in vivo camera system according to claim 1, and also including an antenna array, said array receiving data from said sensor and communicating said data to said data processor.